Mathematical problems from real life for secondary schools using an interactive white board. (Diploma thesis.)

ABSTRACT

The diploma thesis deals with the possibility of IWB application in the teaching of mathematics at a secondary school. The aim was to examine its didactical potential for the teaching of mathematical functions. For this purpose, I created and described three interactive presentations in programs Smart Notebook and Math Tools focused on elementary mathematical functions that are illustrated on examples from real life and interconnect knowledge from diverse subjects. Namely it is a quadratic function and its application in sport, exponential function and its application in geography and goniometric function sinus and its application in music. One of the presentations was applied in practice. The thesis reflects the experience from teaching and also looks into how students perceive using the IWB during teaching. It was confirmed that the teacher's role is in the use of IWB is indispensable. The theoretical part of the thesis contextualizes the IWB application from historical, technical and didactical points of view. The thesis can serve as an inspiration for the practical use of IWB in mathematics teaching.

Key words: interactive white board (IWB), interactive teaching, Smart Notebook, Math Tools, mathematical functions